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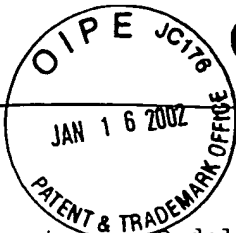
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SEQUENCE LISTING

<110> Hauptmann, Rudolph
Himmeler, Adolph
Maurer-Fogy, Ingrid
Stratowa, Christian

<120> TNF Receptors, TNF Binding Proteins and DNAs Coding for
Them

<130> 98-385-J

<140> 09/899,429

<141> 2001-07-03

<150> 09/792,356

<151> 2000-02-23

<150> 08/477,639

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<151> 1995-02-01

<150> 08/153,287

<151> 1993-11-17

<150> 07/821,750

<151> 1992-01-02

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<170> PatentIn Ver. 2.0

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<222> (88)..(120)

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extracellular proteases following secretion

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<222> (606)..(633)

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gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga ctg gtc cct	96
Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro	
20 25 30	
cac cta ggg gac agg gag aag aga gat agt gtg tgt ccc caa gga aaa	144
His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys	
35 40 45	
tat atc cac cct caa aat aat tcg att tgc tgt acc aag tgc cac aaa	192
Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys	
50 55 60	
gga acc tac ttg tac aat gac tgt cca ggc ccg ggg cag gat acg gac	240
Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp	
65 70 75 80	
tgc agg gag tgt gag agc ggc tcc ttc acc gct tca gaa aac cac ctc	288
Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu	
85 90 95	
aga cac tgc ctc agc tgc tcc aaa tgc cga aag gaa atg ggt cag gtg	336
Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val	
100 105 110	
gag atc tct tct tgc aca gtg gac cgg gac acc gtg tgt ggc tgc agg	384
Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg	
115 120 125	
aag aac cag tac cgg cat tat tgg agt gaa aac ctt ttc cag tgc ttc	432
Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe	
130 135 140	
aat tgc agc ctc tgc ctc aat ggg acc gtg cac ctc tcc tgc cag gag	480
Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu	
145 150 155 160	
aaa cag aac acc gtg tgc acc tgc cat gca ggt ttc ttt cta aga gaa	528
Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu	
165 170 175	
aac gag tgt gtc tcc tgt agt aac tgt aag aaa agc ctg gag tgc acg	576
Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr	
180 185 190	
aag ttg tgc cta ccc cag att gag aat gtt aag ggc act gag gac tca	624
Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser	
195 200 205	

ggc acc aca gtg ctg ttg ccc ctg gtc att ttc ttt ggt ctt tgc ctt	672
Gly Thr Thr Val Leu Leu Pro Leu Val Ile Phe Phe Gly Leu Cys Leu	
210 215 220	
tta tcc ctc ctc ttc att ggt tta atg tat cgc tac caa cgg tgg aag	720
Leu Ser Leu Leu Phe Ile Gly Leu Met Tyr Arg Tyr Gln Arg Trp Lys	
225 230 235 240	
tcc aag ctc tac tcc att gtt tgt ggg aaa tcg aca cct gaa aaa gag	768
Ser Lys Leu Tyr Ser Ile Val Cys Gly Lys Ser Thr Pro Glu Lys Glu	
245 250 255	
ggg gag ctt gaa gga act act act aag ccc ctg gcc cca aac cca agc	816
Gly Glu Leu Glu Gly Thr Thr Thr Lys Pro Leu Ala Pro Asn Pro Ser	
260 265 270	
ttc agt ccc act cca ggc ttc acc ccc acc ctg ggc ttc agt ccc gtg	864
Phe Ser Pro Thr Pro Gly Phe Thr Pro Thr Leu Gly Phe Ser Pro Val	
275 280 285	
ccc agt tcc acc ttc acc tcc agc tcc acc tat acc ccc ggt gac tgt	912
Pro Ser Ser Thr Phe Thr Ser Ser Ser Thr Tyr Thr Pro Gly Asp Cys	
290 295 300	
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Pro Asn Phe Ala Ala Pro Arg Arg Glu Val Ala Pro Pro Tyr Gln Gly	
305 310 315 320	
gct gac ccc atc ctt gcg aca gcc ctc gcc tcc gac ccc atc ccc aac	1008
Ala Asp Pro Ile Leu Ala Thr Ala Leu Ala Ser Asp Pro Ile Pro Asn	
325 330 335	
ccc ctt cag aag tgg gag gac agc gcc cac aag cca cag agc cta gac	1056
Pro Leu Gln Lys Trp Glu Asp Ser Ala His Lys Pro Gln Ser Leu Asp	
340 345 350	
act gat gac ccc gcg acg ctg tac gcc gtg gtg gag aac gtg ccc ccg	1104
Thr Asp Asp Pro Ala Thr Leu Tyr Ala Val Val Glu Asn Val Pro Pro	
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Leu Arg Trp Lys Glu Phe Val Arg Arg Leu Gly Leu Ser Asp His Glu	
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Ile Asp Arg Leu Glu Leu Gln Asn Gly Arg Cys Leu Arg Glu Ala Gln	
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Tyr Ser Met Leu Ala Thr Trp Arg Arg Arg Thr Pro Arg Arg Glu Ala	
405 410 415	
acg ctg gag ctg ctg gga cgc gtg ctc cgc gac atg gac ctg ctg ggc	1296
Thr Leu Glu Leu Leu Gly Arg Val Leu Arg Asp Met Asp Leu Leu Gly	
420 425 430	

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 Cys Leu Glu Asp Ile Glu Glu Ala Leu Cys Gly Pro Ala Ala Leu Pro
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 Pro Ala Pro Ser Leu Leu Arg
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His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
 35 40 45

Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
 50 55 60

Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
 65 70 75 80

Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
 85 90 95

Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val
 100 105 110

Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg
 115 120 125

Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe
 130 135 140

Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu
 145 150 155 160

Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu
 165 170 175

Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr
 180 185 190

Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser
 195 200 205

Gly Thr Thr Val Leu Leu Pro Leu Val Ile Phe Phe Gly Leu Cys Leu
 210 215 220

Leu Ser Leu Leu Phe Ile Gly Leu Met Tyr Arg Tyr Gln Arg Trp Lys
 225 230 235 240
 Ser Lys Leu Tyr Ser Ile Val Cys Gly Lys Ser Thr Pro Glu Lys Glu
 245 250 255
 Gly Glu Leu Glu Gly Thr Thr Thr Lys Pro Leu Ala Pro Asn Pro Ser
 260 265 270
 Phe Ser Pro Thr Pro Gly Phe Thr Pro Thr Leu Gly Phe Ser Pro Val
 275 280 285
 Pro Ser Ser Thr Phe Thr Ser Ser Ser Thr Tyr Thr Pro Gly Asp Cys
 290 295 300
 Pro Asn Phe Ala Ala Pro Arg Arg Glu Val Ala Pro Pro Tyr Gln Gly
 305 310 315 320
 Ala Asp Pro Ile Leu Ala Thr Ala Leu Ala Ser Asp Pro Ile Pro Asn
 325 330 335
 Pro Leu Gln Lys Trp Glu Asp Ser Ala His Lys Pro Gln Ser Leu Asp
 340 345 350
 Thr Asp Asp Pro Ala Thr Leu Tyr Ala Val Val Glu Asn Val Pro Pro
 355 360 365
 Leu Arg Trp Lys Glu Phe Val Arg Arg Leu Gly Leu Ser Asp His Glu
 370 375 380
 Ile Asp Arg Leu Glu Leu Gln Asn Gly Arg Cys Leu Arg Glu Ala Gln
 385 390 395 400
 Tyr Ser Met Leu Ala Thr Trp Arg Arg Arg Thr Pro Arg Arg Glu Ala
 405 410 415
 Thr Leu Glu Leu Leu Gly Arg Val Leu Arg Asp Met Asp Leu Leu Gly
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			20					25					30			
cca	ggc	ccg	ggg	cag	gat	acg	gac	tgc	agg	gag	tgt	gag	agc	ggc	tcc	144
Pro	Gly	Pro	Gly	Gln	Asp	Thr	Asp	Cys	Arg	Glu	Cys	Glu	Ser	Gly	Ser	
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Phe	Thr	Ala	Ser	Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser	Lys	
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Cys	Arg	Lys	Glu	Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val	Asp	
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cgg	gac	acc	gtg	tgt	ggc	tgc	agg	aag	aac	cag	tac	cgg	cat	tat	tgg	288
Arg	Asp	Thr	Val	Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	Trp	
			85					90					95			
agt	gaa	aac	ctt	ttc	cag	tgc	ttc	aat	tgc	agc	ctc	tgc	ctc	aat	ggg	336
Ser	Glu	Asn	Leu	Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn	Gly	
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acc	gtg	cac	ctc	tcc	tgc	cag	gag	aaa	cag	aac	acc	gtg	tgc	acc	tgc	384
Thr	Val	His	Leu	Ser	Cys	Gln	Glu	Lys	Gln	Asn	Thr	Val	Cys	Thr	Cys	
		115					120					125				
cat	gca	ggg	ttc	ttt	cta	aga	gaa	aac	gag	tgt	gtc	tcc	tgt	agt	aac	432
His	Ala	Gly	Phe	Phe	Leu	Arg	Glu	Asn	Glu	Cys	Val	Ser	Cys	Ser	Asn	
	130					135					140					
tgt	aag	aaa	agc	ctg	gag	tgc	acg	aag	ttg	tgc	cta	ccc	cag	att	gag	480
Cys	Lys	Lys	Ser	Leu	Glu	Cys	Thr	Lys	Leu	Cys	Leu	Pro	Gln	Ile	Glu	
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 35 40 45

Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys
50 55 60
Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp
65 70 75 80
Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp
85 90 95
Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly
100 105 110
Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys
115 120 125
His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn
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TNF-BP sequence

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Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp
20 25 30
tgt cca ggc ccg ggg cag gat acg gac tgc agg gag tgt gag agc ggc 144
Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly
35 40 45
tcc ttc acc gct tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc 192
Ser Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser
50 55 60
aaa tgc cga aag gaa atg ggt cag gtg gag atc tct tct tgc aca gtg 240

Lys	Cys	Arg	Lys	Glu	Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val	
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gac	cgg	gac	acc	gtg	tgt	ggc	tgc	agg	aag	aac	cag	tac	cgg	cat	tat	288
Asp	Arg	Asp	Thr	Val	Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	
				85					90					95		
tgg	agt	gaa	aac	ctt	ttc	cag	tgc	ttc	aat	tgc	agc	ctc	tgc	ctc	aat	336
Trp	Ser	Glu	Asn	Leu	Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn	
			100					105					110			
ggg	acc	gtg	cac	ctc	tcc	tgc	cag	gag	aaa	cag	aac	acc	gtg	tgc	acc	384
Gly	Thr	Val	His	Leu	Ser	Cys	Gln	Glu	Lys	Gln	Asn	Thr	Val	Cys	Thr	
			115				120					125				
tgc	cat	gca	ggg	ttc	ttt	cta	aga	gaa	aac	gag	tgt	gtc	tcc	tgt	agt	432
Cys	His	Ala	Gly	Phe	Phe	Leu	Arg	Glu	Asn	Glu	Cys	Val	Ser	Cys	Ser	
			130			135					140					
aac	tgt	aag	aaa	agc	ctg	gag	tgc	acg	aag	ttg	tgc	cta	ccc	cag	att	480
Asn	Cys	Lys	Lys	Ser	Leu	Glu	Cys	Thr	Lys	Leu	Cys	Leu	Pro	Gln	Ile	
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Glu	Asn															

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TNF-BP sequence

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Cys	Pro	Gly	Pro	Gly	Gln	Asp	Thr	Asp	Cys	Arg	Glu	Cys	Glu	Ser	Gly
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Ser	Phe	Thr	Ala	Ser	Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser
	50					55					60				

Lys	Cys	Arg	Lys	Glu	Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val
65					70					75					80

Asp	Arg	Asp	Thr	Val	Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr
				85					90					95	

Trp	Ser	Glu	Asn	Leu	Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn
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Gly Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr
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Cys His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser
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Asn Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile
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gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga ctg gtc cct 96
Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro
20 25 30

cac cta ggg gac agg gag aag aga gat agt gtg tgt ccc caa gga aaa 144
His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
35 40 45

tat atc cac cct caa aat aat tcg att tgc tgt acc aag tgc cac aaa 192
Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
50 55 60

gga acc tac ttg tac aat gac tgt cca ggc ccg ggg cag gat acg gac 240
Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
65 70 75 80

tgc agg gag tgt gag agc ggc tcc ttc acc gct tca gaa aac cac ctc 288
Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
85 90 95

aga cac tgc ctc agc tgc tcc aaa tgc cga aag gaa atg ggt cag gtg 336
Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val
100 105 110

gag atc tct tct tgc aca gtg gac cgg gac acc gtg tgt ggc tgc agg 384

Glu	Ile	Ser	Ser	Cys	Thr	Val	Asp	Arg	Asp	Thr	Val	Cys	Gly	Cys	Arg		
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Lys	Asn	Gln	Tyr	Arg	His	Tyr	Trp	Ser	Glu	Asn	Leu	Phe	Gln	Cys	Phe		
	130					135					140						
aat	tgc	agc	ctc	tgc	ctc	aat	ggg	acc	gtg	cac	ctc	tcc	tgc	cag	gag	480	
Asn	Cys	Ser	Leu	Cys	Leu	Asn	Gly	Thr	Val	His	Leu	Ser	Cys	Gln	Glu		
145					150				155						160		
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Lys	Gln	Asn	Thr	Val	Cys	Thr	Cys	His	Ala	Gly	Phe	Phe	Leu	Arg	Glu		
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aac	gag	tgt	gtc	tcc	tgt	agt	aac	tgt	aag	aaa	agc	ctg	gag	tgc	acg	576	
Asn	Glu	Cys	Val	Ser	Cys	Ser	Asn	Cys	Lys	Lys	Ser	Leu	Glu	Cys	Thr		
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Lys	Leu	Cys	Leu	Pro	Gln	Ile	Glu	Asn	Val	Lys	Gly	Thr	Glu	Asp	Ser		
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TNF-BP sequence

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			20					25					30		

His	Leu	Gly	Asp	Arg	Glu	Lys	Arg	Asp	Ser	Val	Cys	Pro	Gln	Gly	Lys
		35					40					45			

Tyr	Ile	His	Pro	Gln	Asn	Asn	Ser	Ile	Cys	Cys	Thr	Lys	Cys	His	Lys
	50					55					60				

Gly	Thr	Tyr	Leu	Tyr	Asn	Asp	Cys	Pro	Gly	Pro	Gly	Gln	Asp	Thr	Asp
65					70				75						80

Cys	Arg	Glu	Cys	Glu	Ser	Gly	Ser	Phe	Thr	Ala	Ser	Glu	Asn	His	Leu
				85					90					95	

Arg	His	Cys	Leu	Ser	Cys	Ser	Lys	Cys	Arg	Lys	Glu	Met	Gly	Gln	Val
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Glu	Ile	Ser	Ser	Cys	Thr	Val	Asp	Arg	Asp	Thr	Val	Cys	Gly	Cys	Arg				
		115						120					125						
Lys	Asn	Gln	Tyr	Arg	His	Tyr	Trp	Ser	Glu	Asn	Leu	Phe	Gln	Cys	Phe				
	130					135					140								
Asn	Cys	Ser	Leu	Cys	Leu	Asn	Gly	Thr	Val	His	Leu	Ser	Cys	Gln	Glu				
145					150					155					160				
Lys	Gln	Asn	Thr	Val	Cys	Thr	Cys	His	Ala	Gly	Phe	Phe	Leu	Arg	Glu				
				165					170					175					
Asn	Glu	Cys	Val	Ser	Cys	Ser	Asn	Cys	Lys	Lys	Ser	Leu	Glu	Cys	Thr				
			180					185					190						
Lys	Leu	Cys	Leu	Pro	Gln	Ile	Glu	Asn	Val	Lys	Gly	Thr	Glu	Asp	Ser				
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<211> 549

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<220>

<221> CDS

<222> (1)..(549)

<400> 9

atg	ctg	gtc	cct	cac	cta	ggg	gac	agg	gag	aag	aga	gat	agt	gtg	tgt	48
Met	Leu	Val	Pro	His	Leu	Gly	Asp	Arg	Glu	Lys	Arg	Asp	Ser	Val	Cys	
1				5					10					15		
ccc	caa	gga	aaa	tat	atc	cac	cct	caa	aat	aat	tcg	att	tgc	tgt	acc	96
Pro	Gln	Gly	Lys	Tyr	Ile	His	Pro	Gln	Asn	Asn	Ser	Ile	Cys	Cys	Thr	
			20					25					30			
aag	tgc	cac	aaa	gga	acc	tac	ttg	tac	aat	gac	tgt	cca	ggc	ccg	ggg	144
Lys	Cys	His	Lys	Gly	Thr	Tyr	Leu	Tyr	Asn	Asp	Cys	Pro	Gly	Pro	Gly	
		35					40					45				
cag	gat	acg	gac	tgc	agg	gag	tgt	gag	agc	ggc	tcc	ttc	acc	gct	tca	192
Gln	Asp	Thr	Asp	Cys	Arg	Glu	Cys	Glu	Ser	Gly	Ser	Phe	Thr	Ala	Ser	
	50					55					60					
gaa	aac	cac	ctc	aga	cac	tgc	ctc	agc	tgc	tcc	aaa	tgc	cga	aag	gaa	240
Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser	Lys	Cys	Arg	Lys	Glu	
65					70				75						80	

atg ggt cag gtg gag atc tct tct tgc aca gtg gac cgg gac acc gtg	288
Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val	
85 90 95	
tgt ggc tgc agg aag aac cag tac cgg cat tat tgg agt gaa aac ctt	336
Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu	
100 105 110	
ttc cag tgc ttc aat tgc agc ctc tgc ctc aat ggg acc gtg cac ctc	384
Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu	
115 120 125	
tcc tgc cag gag aaa cag aac acc gtg tgc acc tgc cat gca ggt ttc	432
Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe	
130 135 140	
ttt cta aga gaa aac gag tgt gtc tcc tgt agt aac tgt aag aaa agc	480
Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser	
145 150 155 160	
ctg gag tgc acg aag ttg tgc cta ccc cag att gag aat gtt aag ggc	528
Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly	
165 170 175	
act gag gac tca ggc acc aca	549
Thr Glu Asp Ser Gly Thr Thr	
180	

<210> 10

<211> 183

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<400> 10

Met	Leu	Val	Pro	His	Leu	Gly	Asp	Arg	Glu	Lys	Arg	Asp	Ser	Val	Cys
1				5					10					15	

Pro	Gln	Gly	Lys	Tyr	Ile	His	Pro	Gln	Asn	Asn	Ser	Ile	Cys	Cys	Thr
			20					25					30		

Lys	Cys	His	Lys	Gly	Thr	Tyr	Leu	Tyr	Asn	Asp	Cys	Pro	Gly	Pro	Gly
		35					40					45			

Gln	Asp	Thr	Asp	Cys	Arg	Glu	Cys	Glu	Ser	Gly	Ser	Phe	Thr	Ala	Ser
	50					55					60				

Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser	Lys	Cys	Arg	Lys	Glu
65					70					75					80

Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val	Asp	Arg	Asp	Thr	Val
				85					90					95	

Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu
 100 105 110
 Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu
 115 120 125
 Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe
 130 135 140
 Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser
 145 150 155 160
 Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly
 165 170 175
 Thr Glu Asp Ser Gly Thr Thr
 180

<210> 11
 <211> 600
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

<220>
 <221> CDS
 <222> (1)..(600)

<400> 11
 atg ggc ctc tcc acc gtg cct gac ctg ctg ctg cca ctg gtg ctc ctg 48
 Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu
 1 5 10 15
 gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga gat agt gtg 96
 Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Asp Ser Val
 20 25 30
 tgt ccc caa gga aaa tat atc cac cct caa aat aat tcg att tgc tgt 144
 Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys
 35 40 45
 acc aag tgc cac aaa gga acc tac ttg tac aat gac tgt cca ggc ccg 192
 Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro
 50 55 60
 ggg cag gat acg gac tgc agg gag tgt gag agc ggc tcc ttc acc gct 240
 Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala
 65 70 75 80
 tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc aaa tgc cga aag 288
 Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys
 85 90 95

gaa atg ggt cag gtg gag atc tct tct tgc aca gtg gac cgg gac acc	336
Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr	
100 105 110	
gtg tgt ggc tgc agg aag aac cag tac cgg cat tat tgg agt gaa aac	384
Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn	
115 120 125	
ctt ttc cag tgc ttc aat tgc agc ctc tgc ctc aat ggg acc gtg cac	432
Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His	
130 135 140	
ctc tcc tgc cag gag aaa cag aac acc gtg tgc acc tgc cat gca ggt	480
Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly	
145 150 155 160	
ttc ttt cta aga gaa aac gag tgt gtc tcc tgt agt aac tgt aag aaa	528
Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys	
165 170 175	
agc ctg gag tgc acg aag ttg tgc cta ccc cag att gag aat gtt aag	576
Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys	
180 185 190	
ggc act gag gac tca ggc acc aca	600
Gly Thr Glu Asp Ser Gly Thr Thr	
195 200	

<210> 12

<211> 200

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<400> 12

Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu
1 5 10 15

Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Asp Ser Val
20 25 30

Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys
35 40 45

Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro
50 55 60

Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala
65 70 75 80

Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys
85 90 95

Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr
 100 105 110
 Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn
 115 120 125
 Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His
 130 135 140
 Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly
 145 150 155 160
 Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys
 165 170 175
 Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys
 180 185 190
 Gly Thr Glu Asp Ser Gly Thr Thr
 195 200

<210> 13
 <211> 603
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

<220>
 <221> CDS
 <222> (1)..(603)

<400> 13
 atg ggc ctc tcc acc gtg cct gac ctg ctg ctg cca ctg gtg ctc ctg 48
 Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu
 1 5 10 15
 gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga ctg gtc cct 96
 Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro
 20 25 30
 cac cta ggg gac agg gag aag aga gat agt gtg tgt ccc caa gga aaa 144
 His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
 35 40 45
 tat atc cac cct caa aat aat tcg att tgc tgt acc aag tgc cac aaa 192
 Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
 50 55 60
 gga acc tac ttg tac aat gac tgt cca ggc ccg ggg cag gat acg gac 240
 Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
 65 70 75 80

tgc agg gag tgt gag agc ggc tcc ttc acc gct tca gaa aac cac ctc	288
Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu	
85 90 95	
aga cac tgc ctc agc tgc tcc aaa tgc cga aag gaa atg ggt cag gtg	336
Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val	
100 105 110	
gag atc tct tct tgc aca gtg gac cgg gac acc gtg tgt ggc tgc agg	384
Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg	
115 120 125	
aag aac cag tac cgg cat tat tgg agt gaa aac ctt ttc cag tgc ttc	432
Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe	
130 135 140	
aat tgc agc ctc tgc ctc aat ggg acc gtg cac ctc tcc tgc cag gag	480
Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu	
145 150 155 160	
aaa cag aac acc gtg tgc acc tgc cat gca ggt ttc ttt cta aga gaa	528
Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu	
165 170 175	
aac gag tgt gtc tcc tgt agt aac tgt aag aaa agc ctg gag tgc acg	576
Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr	
180 185 190	
aag ttg tgc cta ccc cag att gag aat	603
Lys Leu Cys Leu Pro Gln Ile Glu Asn	
195 200	

<210> 14
 <211> 201
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

<400> 14
Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu
1 5 10 15
Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro
20 25 30
His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
35 40 45
Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
50 55 60
Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
65 70 75 80

Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
 85 90 95
 Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val
 100 105 110
 Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg
 115 120 125
 Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe
 130 135 140
 Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu
 145 150 155 160
 Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu
 165 170 175
 Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr
 180 185 190
 Lys Leu Cys Leu Pro Gln Ile Glu Asn
 195 200

<210> 15
 <211> 519
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

<220>
 <221> CDS
 <222> (1)..(519)

<400> 15
 atg ctg gtc cct cac cta ggg gac agg gag aag aga gat agt gtg tgt 48
 Met Leu Val Pro His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys
 1 5 10 15
 ccc caa gga aaa tat atc cac cct caa aat aat tcg att tgc tgt acc 96
 Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr
 20 25 30
 aag tgc cac aaa gga acc tac ttg tac aat gac tgt cca ggc ccg ggg 144
 Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly
 35 40 45
 cag gat acg gac tgc agg gag tgt gag agc ggc tcc ttc acc gct tca 192
 Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser
 50 55 60
 gaa aac cac ctc aga cac tgc ctc agc tgc tcc aaa tgc cga aag gaa 240

Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser	Lys	Cys	Arg	Lys	Glu	
65					70					75					80	
atg	ggt	cag	gtg	gag	atc	tct	tct	tgc	aca	gtg	gac	cgg	gac	acc	gtg	288
Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val	Asp	Arg	Asp	Thr	Val	
				85					90					95		
tgt	ggc	tgc	agg	aag	aac	cag	tac	cgg	cat	tat	tgg	agt	gaa	aac	ctt	336
Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	Trp	Ser	Glu	Asn	Leu	
			100					105					110			
ttc	cag	tgc	ttc	aat	tgc	agc	ctc	tgc	ctc	aat	ggg	acc	gtg	cac	ctc	384
Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn	Gly	Thr	Val	His	Leu	
			115				120					125				
tcc	tgc	cag	gag	aaa	cag	aac	acc	gtg	tgc	acc	tgc	cat	gca	ggg	ttc	432
Ser	Cys	Gln	Glu	Lys	Gln	Asn	Thr	Val	Cys	Thr	Cys	His	Ala	Gly	Phe	
			130			135					140					
ttt	cta	aga	gaa	aac	gag	tgt	gtc	tcc	tgt	agt	aac	tgt	aag	aaa	agc	480
Phe	Leu	Arg	Glu	Asn	Glu	Cys	Val	Ser	Cys	Ser	Asn	Cys	Lys	Lys	Ser	
145					150				155						160	
ctg	gag	tgc	acg	aag	ttg	tgc	cta	ccc	cag	att	gag	aat				519
Leu	Glu	Cys	Thr	Lys	Leu	Cys	Leu	Pro	Gln	Ile	Glu	Asn				
				165					170							

<210> 16

<211> 173

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<400> 16

Met	Leu	Val	Pro	His	Leu	Gly	Asp	Arg	Glu	Lys	Arg	Asp	Ser	Val	Cys
1				5					10					15	

Pro	Gln	Gly	Lys	Tyr	Ile	His	Pro	Gln	Asn	Asn	Ser	Ile	Cys	Cys	Thr
			20					25					30		

Lys	Cys	His	Lys	Gly	Thr	Tyr	Leu	Tyr	Asn	Asp	Cys	Pro	Gly	Pro	Gly
		35					40					45			

Gln	Asp	Thr	Asp	Cys	Arg	Glu	Cys	Glu	Ser	Gly	Ser	Phe	Thr	Ala	Ser
	50					55				60					

Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser	Lys	Cys	Arg	Lys	Glu
65					70					75					80

Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val	Asp	Arg	Asp	Thr	Val
				85					90					95	

Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	Trp	Ser	Glu	Asn	Leu
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

100	105	110
Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu		
115	120	125
Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe		
130	135	140
Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser		
145	150	155
160		
Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn		
165	170	

<210> 17

<211> 570

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<220>

<221> CDS

<222> (1)..(570)

<400> 17

atg ggc ctc tcc acc gtg cct gac ctg ctg ctg cca ctg gtg ctc ctg	48
Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu	
1 5 10 15	
gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga gat agt gtg	96
Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Asp Ser Val	
20 25 30	
tgt ccc caa gga aaa tat atc cac cct caa aat aat tcg att tgc tgt	144
Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys	
35 40 45	
acc aag tgc cac aaa gga acc tac ttg tac aat gac tgt cca ggc ccg	192
Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro	
50 55 60	
ggg cag gat acg gac tgc agg gag tgt gag agc ggc tcc ttc acc gct	240
Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala	
65 70 75 80	
tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc aaa tgc cga aag	288
Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys	
85 90 95	
gaa atg ggt cag gtg gag atc tct tct tgc aca gtg gac cgg gac acc	336
Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr	
100 105 110	

gtg	tgt	ggc	tgc	agg	aag	aac	cag	tac	cgg	cat	tat	tgg	agt	gaa	aac	384
Val	Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	Trp	Ser	Glu	Asn	
		115					120					125				
ctt	ttc	cag	tgc	ttc	aat	tgc	agc	ctc	tgc	ctc	aat	ggg	acc	gtg	cac	432
Leu	Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn	Gly	Thr	Val	His	
		130				135					140					
ctc	tcc	tgc	cag	gag	aaa	cag	aac	acc	gtg	tgc	acc	tgc	cat	gca	ggg	480
Leu	Ser	Cys	Gln	Glu	Lys	Gln	Asn	Thr	Val	Cys	Thr	Cys	His	Ala	Gly	
		145			150					155					160	
ttc	ttt	cta	aga	gaa	aac	gag	tgt	gtc	tcc	tgt	agt	aac	tgt	aag	aaa	528
Phe	Phe	Leu	Arg	Glu	Asn	Glu	Cys	Val	Ser	Cys	Ser	Asn	Cys	Lys	Lys	
				165					170					175		
agc	ctg	gag	tgc	acg	aag	ttg	tgc	cta	ccc	cag	att	gag	aat			570
Ser	Leu	Glu	Cys	Thr	Lys	Leu	Cys	Leu	Pro	Gln	Ile	Glu	Asn			
			180					185					190			

<210> 18

<211> 190

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<400> 18

Met	Gly	Leu	Ser	Thr	Val	Pro	Asp	Leu	Leu	Leu	Pro	Leu	Val	Leu	Leu
1				5					10					15	

Glu	Leu	Leu	Val	Gly	Ile	Tyr	Pro	Ser	Gly	Val	Ile	Gly	Asp	Ser	Val
			20					25					30		

Cys	Pro	Gln	Gly	Lys	Tyr	Ile	His	Pro	Gln	Asn	Asn	Ser	Ile	Cys	Cys
		35					40					45			

Thr	Lys	Cys	His	Lys	Gly	Thr	Tyr	Leu	Tyr	Asn	Asp	Cys	Pro	Gly	Pro
	50					55					60				

Gly	Gln	Asp	Thr	Asp	Cys	Arg	Glu	Cys	Glu	Ser	Gly	Ser	Phe	Thr	Ala
	65				70					75					80

Ser	Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser	Lys	Cys	Arg	Lys
				85					90					95	

Glu	Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val	Asp	Arg	Asp	Thr
			100					105					110		

Val	Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	Trp	Ser	Glu	Asn
		115					120					125			

Leu	Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn	Gly	Thr	Val	His
		130				135					140				

Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly
 145 150 155 160

Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys
 165 170 175

Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn
 180 185 190

<210> 19

<211> 516

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

<220>

<221> CDS

<222> (1)..(516)

<400> 19

atg	gat	agt	gtg	tgt	ccc	caa	gga	aaa	tat	atc	cac	cct	caa	aat	aat	48
Met	Asp	Ser	Val	Cys	Pro	Gln	Gly	Lys	Tyr	Ile	His	Pro	Gln	Asn	Asn	
1				5				10					15			

tcg	att	tgc	tgt	acc	aag	tgc	cac	aaa	gga	acc	tac	ttg	tac	aat	gac	96
Ser	Ile	Cys	Cys	Thr	Lys	Cys	His	Lys	Gly	Thr	Tyr	Leu	Tyr	Asn	Asp	
			20					25				30				

tgt	cca	ggc	ccg	ggg	cag	gat	acg	gac	tgc	agg	gag	tgt	gag	agc	ggc	144
Cys	Pro	Gly	Pro	Gly	Gln	Asp	Thr	Asp	Cys	Arg	Glu	Cys	Glu	Ser	Gly	
		35					40					45				

tcc	ttc	acc	gct	tca	gaa	aac	cac	ctc	aga	cac	tgc	ctc	agc	tgc	tcc	192
Ser	Phe	Thr	Ala	Ser	Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser	
	50					55				60						

aaa	tgc	cga	aag	gaa	atg	ggt	cag	gtg	gag	atc	tct	tct	tgc	aca	gtg	240
Lys	Cys	Arg	Lys	Glu	Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val	
65				70				75						80		

gac	cgg	gac	acc	gtg	tgt	ggc	tgc	agg	aag	aac	cag	tac	cgg	cat	tat	288
Asp	Arg	Asp	Thr	Val	Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	
			85					90					95			

tgg	agt	gaa	aac	ctt	ttc	cag	tgc	ttc	aat	tgc	agc	ctc	tgc	ctc	aat	336
Trp	Ser	Glu	Asn	Leu	Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn	
			100					105					110			

ggg	acc	gtg	cac	ctc	tcc	tgc	cag	gag	aaa	cag	aac	acc	gtg	tgc	acc	384
Gly	Thr	Val	His	Leu	Ser	Cys	Gln	Glu	Lys	Gln	Asn	Thr	Val	Cys	Thr	
		115					120					125				

tgc cat gca ggt ttc ttt cta aga gaa aac gag tgt gtc tcc tgt agt	432
Cys His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser	
130 135 140	

aac tgt aag aaa agc ctg gag tgc acg aag ttg tgc cta ccc cag att	480
Asn Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile	
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<210> 20

<211> 172

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

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Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp
20 25 30

Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly
35 40 45

Ser Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser
50 55 60

Lys Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val
65 70 75 80

Asp Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr
85 90 95

Trp Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn
100 105 110

Gly Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr
115 120 125

Cys His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser
130 135 140

Asn Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile
145 150 155 160

Glu Asn Val Lys Gly Thr Glu Asp Ser Gly Thr Thr
165 170

<400> 21																
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								Met Gly		Leu Ser		Thr Val		Pro		
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gac ctg ctg ctg cca ctg gtg ttc ctg gag ctg ttg gtg gga ata tac		281														
Asp Leu Leu Leu Pro Leu Val Phe Leu Glu Leu Leu Val Gly Ile Tyr																
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ccc tca ggg gtt att gga ctg gtc cct cac cta ggg gac agg gag aag		329														
Pro Ser Gly Val Ile Gly Leu Val Pro His Leu Gly Asp Arg Glu Lys																
		25				30				35						
aga gat agt gtg tgt ccc caa gga aaa tat atc cac cct caa aat aat		377														
Arg Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn																
		40				45				50				55		
tcg att tgc tgt acc aag tgc cac aaa gga acc tac ttg tac aat gac		425														
Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp																
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tgt cca ggc ccg ggg cag gat acg gac tgc agg gag tgt gag agc ggc		473														
Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly																
		75				80				85						
tcc ttc acc gct tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc		521														
Ser Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser																
		90				95				100						
aaa tgc cga aag gaa atc ggt cag gtg gag atc tct tct tgc aca gtg		569														
Lys Cys Arg Lys Glu Ile Gly Gln Val Glu Ile Ser Ser Cys Thr Val																
		105				110				115						
gac cgg gac acc gtg tgt ggc tgc agg aag aac cag tac cgg cat tat		617														
Asp Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr																
120				125				130				135				
tgg aqt gaa aac ctt ttc cag tgc ttc aat tgc agc ctc tgc ctc aat		665														

Trp	Ser	Glu	Asn	Leu	Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn	
				140					145					150		
ggg	acc	gtg	cac	ctc	tcc	tgc	cag	gag	aaa	cag	aac	acc	gtg	tgc	acc	713
Gly	Thr	Val	His	Leu	Ser	Cys	Gln	Glu	Lys	Gln	Asn	Thr	Val	Cys	Thr	
			155					160					165			
tgc	cat	gca	ggg	ttc	ttt	cta	aga	gaa	aac	gag	tgt	gtc	tcc	tgt	agt	761
Cys	His	Ala	Gly	Phe	Phe	Leu	Arg	Glu	Asn	Glu	Cys	Val	Ser	Cys	Ser	
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aac	tgt	aag	aaa	agc	ctg	gag	tgc	agg	aag	ttg	tgc	cta	ccc	cag	att	809
Asn	Cys	Lys	Lys	Ser	Leu	Glu	Cys	Arg	Lys	Leu	Cys	Leu	Pro	Gln	Ile	
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gag	aat	gtt	aag	ggc	act	gag	gac	tca	ggc	acc	aca	gtg	ctg	ttg	ccc	857
Glu	Asn	Val	Lys	Gly	Thr	Glu	Asp	Ser	Gly	Thr	Thr	Val	Leu	Leu	Pro	
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Leu	Val	Ile	Phe	Phe	Gly	Leu	Cys	Leu	Leu	Ser	Leu	Leu	Phe	Ile	Gly	
			220					225						230		
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Leu	Met	Tyr	Arg	Tyr	Gln	Arg	Trp	Lys	Ser	Lys	Leu	Tyr	Ser	Ile	Val	
			235					240					245			
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Cys	Gly	Lys	Ser	Thr	Pro	Glu	Lys	Glu	Gly	Glu	Leu	Glu	Gly	Thr	Thr	
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act	aag	ccc	ctg	gcc	cca	aac	cca	agc	ttc	agt	ccc	act	cca	ggc	ttc	1049
Thr	Lys	Pro	Leu	Ala	Pro	Asn	Pro	Ser	Phe	Ser	Pro	Thr	Pro	Gly	Phe	
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acc	ccc	acc	ctg	ggc	ttc	agt	ccc	gtg	ccc	agt	tcc	acc	ttc	acc	tcc	1097
Thr	Pro	Thr	Leu	Gly	Phe	Ser	Pro	Val	Pro	Ser	Ser	Thr	Phe	Thr	Ser	
280					285					290					295	
agc	tcc	acc	tat	acc	ccc	ggg	gac	tgt	ccc	aac	ttt	gcg	gct	ccc	cgc	1145
Ser	Ser	Thr	Tyr	Thr	Pro	Gly	Asp	Cys	Pro	Asn	Phe	Ala	Ala	Pro	Arg	
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aga	gag	gtg	gca	cca	ccc	tat	cag	ggg	gct	gac	ccc	atc	ctt	gcg	aca	1193
Arg	Glu	Val	Ala	Pro	Pro	Tyr	Gln	Gly	Ala	Asp	Pro	Ile	Leu	Ala	Thr	
			315					320					325			
gcc	ctc	gcc	tcc	gac	ccc	atc	ccc	aac	ccc	ctt	cag	aag	tgg	gag	gac	1241
Ala	Leu	Ala	Ser	Asp	Pro	Ile	Pro	Asn	Pro	Leu	Gln	Lys	Trp	Glu	Asp	
			330					335				340				
agc	gcc	cac	aag	cca	cag	agc	cta	gac	act	gat	gac	ccc	gcg	acg	ctg	1289
Ser	Ala	His	Lys	Pro	Gln	Ser	Leu	Asp	Thr	Asp	Asp	Pro	Ala	Thr	Leu	
		345				350					355					
tac	gcc	gtg	gtg	gag	aac	gtg	ccc	ccg	ttg	cgc	tgg	aaggaattc				1334
Tyr	Ala	Val	Val	Glu	Asn	Val	Pro	Pro	Leu	Arg	Trp					

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365

370

<210> 22

<211> 371

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: cDNA insert of
lambdaTNF-BP15 and pTNF-BP15 vectors

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1

5

10

15

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20

25

30

His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys

35

40

45

Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys

50

55

60

Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp

65

70

75

80

Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu

85

90

95

Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Ile Gly Gln Val

100

105

110

Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg

115

120

125

Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe

130

135

140

Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu

145

150

155

160

Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu

165

170

175

Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Arg

180

185

190

Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser

195

200

205

Gly Thr Thr Val Leu Leu Pro Leu Val Ile Phe Phe Gly Leu Cys Leu

210

215

220

Leu Ser Leu Leu Phe Ile Gly Leu Met Tyr Arg Tyr Gln Arg Trp Lys

225

230

235

240

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<210> 24

<211> 2173

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: raTNF-R8

<220>

<221> CDS

<222> (245) .. (1627)

<400> 24

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ggac atg ggt ctc ccc atc gtg cct ggc ctg ctg ctg tca ctg gtg ctc 289
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Leu Ala Leu Leu Met Gly Ile His Pro Ser Gly Val Thr Gly Leu Val
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cct tct ctt ggt gac cgg gag aag agg gat aat ttg tgt ccc cag gga 385
Pro Ser Leu Gly Asp Arg Glu Lys Arg Asp Asn Leu Cys Pro Gln Gly
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aag tat gcc cat cca aag aat aat tcc atc tgc tgc acc aag tgc cac 433
Lys Tyr Ala His Pro Lys Asn Asn Ser Ile Cys Cys Thr Lys Cys His
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aaa gga acc tac ttg gtg agt gac tgt cca agc cca ggg cag gaa aca 481
Lys Gly Thr Tyr Leu Val Ser Asp Cys Pro Ser Pro Gly Gln Glu Thr
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gtc tgc gag ctc tct cat aaa ggc acc ttt aca gct tcg cag aac cac 529
Val Cys Glu Leu Ser His Lys Gly Thr Phe Thr Ala Ser Gln Asn His
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Val Arg Gln Cys Leu Ser Cys Lys Thr Cys Arg Lys Glu Met Phe Gln
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gtg gag att tct cct tgc aaa gct gac atg gac acc gtg tgt ggc tgc 625
Val Glu Ile Ser Pro Cys Lys Ala Asp Met Asp Thr Val Cys Gly Cys
      115            120            125
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Lys Lys Asn Gln Phe Gln Arg Tyr Leu Ser Glu Thr His Phe Gln Cys
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Glu Lys Gln Asn Thr Val Cys Asn Cys His Ala Gly Phe Phe Leu Ser
      160            165            170            175
gga aat gag tgc acc cct tgc agc cac tgc aag aaa aat cag gaa tgt 817
Gly Asn Glu Cys Thr Pro Cys Ser His Cys Lys Lys Asn Gln Glu Cys
      180            185            190
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atg aag ctg tgc cta cct cca gtt gca aat gtc aca aac ccc cag gac	865
Met Lys Leu Cys Leu Pro Pro Val Ala Asn Val Thr Asn Pro Gln Asp	
195 200 205	
tca ggt act gcc gtg ctg ttg cct ctg gtt atc ttc cta ggt ctt tgc	913
Ser Gly Thr Ala Val Leu Leu Pro Leu Val Ile Phe Leu Gly Leu Cys	
210 215 220	
ctt tta ttc ttt atc tgc atc agt cta ctg tgc cga tat ccc cag tgg	961
Leu Leu Phe Phe Ile Cys Ile Ser Leu Leu Cys Arg Tyr Pro Gln Trp	
225 230 235	
agg ccc agg gtc tac tcc atc att tgt agg gat tca gct cct gtc aaa	1009
Arg Pro Arg Val Tyr Ser Ile Ile Cys Arg Asp Ser Ala Pro Val Lys	
240 245 250 255	
gag gtg gag ggt gaa gga att gtt act aag ccc cta act cca gcc tct	1057
Glu Val Glu Gly Glu Gly Ile Val Thr Lys Pro Leu Thr Pro Ala Ser	
260 265 270	
atc cca gcc ttc agc ccc aac ccc ggc ttc aac ccc act ctg ggc ttc	1105
Ile Pro Ala Phe Ser Pro Asn Pro Gly Phe Asn Pro Thr Leu Gly Phe	
275 280 285	
agc acc acc cca cgc ttc agt cat cct gtc tcc agt acc ccc atc agc	1153
Ser Thr Thr Pro Arg Phe Ser His Pro Val Ser Ser Thr Pro Ile Ser	
290 295 300	
ccc gtc ttc ggt cct agt aac tgg cac aac ttc gtg cca cct gta aga	1201
Pro Val Phe Gly Pro Ser Asn Trp His Asn Phe Val Pro Pro Val Arg	
305 310 315	
gag gtg gtc cca acc cag ggt gct gac cct ctc ctc tac gga tcc ctc	1249
Glu Val Val Pro Thr Gln Gly Ala Asp Pro Leu Leu Tyr Gly Ser Leu	
320 325 330 335	
aac cct gtg cca atc ccc gcc cct gtt cgg aaa tgg gaa gac gtc gtc	1297
Asn Pro Val Pro Ile Pro Ala Pro Val Arg Lys Trp Glu Asp Val Val	
340 345 350	
gcg gcc cag cca caa cgg ctt gac act gca gac cct gcg atg ctg tat	1345
Ala Ala Gln Pro Gln Arg Leu Asp Thr Ala Asp Pro Ala Met Leu Tyr	
355 360 365	
gct gtg gtg gat ggc gtg cct ccg aca cgc tgg aag gag ttc atg cgg	1393
Ala Val Val Asp Gly Val Pro Pro Thr Arg Trp Lys Glu Phe Met Arg	
370 375 380	
ctc ctg ggg ctg agc gag cac gag atc gag cgg ttg gag ctg cag aac	1441
Leu Leu Gly Leu Ser Glu His Glu Ile Glu Arg Leu Glu Leu Gln Asn	
385 390 395	
ggg cgt tgc ctc cgc gag gct cat tac agc atg ctg gaa gcc tgg cgg	1489
Gly Arg Cys Leu Arg Glu Ala His Tyr Ser Met Leu Glu Ala Trp Arg	
400 405 410 415	
cgc cgc aca ccg cga cac gag gcc acg ctg gac gta gtg ggc cgc gtg	1537

Arg Arg Thr Pro Arg His Glu Ala Thr Leu Asp Val Val Gly Arg Val
420 425 430

ctt tgc gac atg aac ctg cgt ggc tgc ctg gag aac atc cgc gag act 1585
Leu Cys Asp Met Asn Leu Arg Gly Cys Leu Glu Asn Ile Arg Glu Thr
435 440 445

cta gaa agc cct gcc cac tcg tcc acg acc cac ctc ccg cga 1627
Leu Glu Ser Pro Ala His Ser Ser Thr Thr His Leu Pro Arg
450 455 460

taaggccaca cccccacctc aggaacggga ctcgaaggac catcctgcta gatgccctgc 1687

ttccctgtga acctcctctt tggtcctcta gggggcaggc tcgatctggc aggctcgatc 1747

tggcagccac ttccttggtg ctaccgactt ggtgtacata gcttttccca gctgccgagg 1807

acagcctgtg ccagccactt gtgcatggca ggggaagtgtg ccattctgctc ccagacagct 1867

gaggggtgccaa aaagccagga gaggtgattg tggagaaaaa gcacaatcta tctgataccc 1927

acttgggatg caaggaccca aacaaagctt ctcagggcct cctcagttga tttctggggc 1987

cttttcacag tagataaaac agtctttgta ttgattatat cacactaatg gatgaacggg 2047

tgaactccct aaggtagggg caagcacaga acagtggggg ctccagctgg agcccccgac 2107

tcttgtaaata aactaaaaa tctaaaagtg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2167

gaattc 2173

<210> 25 /
<211> 461
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: raTNF-R8

<400> 25
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1 5 10 15

Ala Leu Leu Met Gly Ile His Pro Ser Gly Val Thr Gly Leu Val Pro
20 25 30

Ser Leu Gly Asp Arg Glu Lys Arg Asp Asn Leu Cys Pro Gln Gly Lys
35 40 45

Tyr Ala His Pro Lys Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
50 55 60

Gly Thr Tyr Leu Val Ser Asp Cys Pro Ser Pro Gly Gln Glu Thr Val
65 70 75 80

Cys Glu Leu Ser His Lys Gly Thr Phe Thr Ala Ser Gln Asn His Val

85										90					95				
Arg	Gln	Cys	Leu	Ser	Cys	Lys	Thr	Cys	Arg	Lys	Glu	Met	Phe	Gln	Val				
			100						105					110					
Glu	Ile	Ser	Pro	Cys	Lys	Ala	Asp	Met	Asp	Thr	Val	Cys	Gly	Cys	Lys				
		115					120					125							
Lys	Asn	Gln	Phe	Gln	Arg	Tyr	Leu	Ser	Glu	Thr	His	Phe	Gln	Cys	Val				
	130					135					140								
Asp	Cys	Ser	Pro	Cys	Phe	Asn	Gly	Thr	Val	Thr	Ile	Pro	Cys	Lys	Glu				
145					150					155					160				
Lys	Gln	Asn	Thr	Val	Cys	Asn	Cys	His	Ala	Gly	Phe	Phe	Leu	Ser	Gly				
				165					170					175					
Asn	Glu	Cys	Thr	Pro	Cys	Ser	His	Cys	Lys	Lys	Asn	Gln	Glu	Cys	Met				
			180					185					190						
Lys	Leu	Cys	Leu	Pro	Pro	Val	Ala	Asn	Val	Thr	Asn	Pro	Gln	Asp	Ser				
		195					200					205							
Gly	Thr	Ala	Val	Leu	Leu	Pro	Leu	Val	Ile	Phe	Leu	Gly	Leu	Cys	Leu				
	210					215					220								
Leu	Phe	Phe	Ile	Cys	Ile	Ser	Leu	Leu	Cys	Arg	Tyr	Pro	Gln	Trp	Arg				
225					230					235					240				
Pro	Arg	Val	Tyr	Ser	Ile	Ile	Cys	Arg	Asp	Ser	Ala	Pro	Val	Lys	Glu				
				245					250					255					
Val	Glu	Gly	Glu	Gly	Ile	Val	Thr	Lys	Pro	Leu	Thr	Pro	Ala	Ser	Ile				
			260					265					270						
Pro	Ala	Phe	Ser	Pro	Asn	Pro	Gly	Phe	Asn	Pro	Thr	Leu	Gly	Phe	Ser				
		275					280					285							
Thr	Thr	Pro	Arg	Phe	Ser	His	Pro	Val	Ser	Ser	Thr	Pro	Ile	Ser	Pro				
		290				295					300								
Val	Phe	Gly	Pro	Ser	Asn	Trp	His	Asn	Phe	Val	Pro	Pro	Val	Arg	Glu				
305					310				315					320					
Val	Val	Pro	Thr	Gln	Gly	Ala	Asp	Pro	Leu	Leu	Tyr	Gly	Ser	Leu	Asn				
				325					330					335					
Pro	Val	Pro	Ile	Pro	Ala	Pro	Val	Arg	Lys	Trp	Glu	Asp	Val	Val	Ala				
			340					345					350						
Ala	Gln	Pro	Gln	Arg	Leu	Asp	Thr	Ala	Asp	Pro	Ala	Met	Leu	Tyr	Ala				
		355					360					365							
Val	Val	Asp	Gly	Val	Pro	Pro	Thr	Arg	Trp	Lys	Glu	Phe	Met	Arg	Leu				
		370					375				380								
Leu	Gly	Leu	Ser	Glu	His	Glu	Ile	Glu	Arg	Leu	Glu	Leu	Gln	Asn	Gly				

385		390		395		400
Arg Cys Leu Arg	Glu Ala His Tyr Ser Met Leu Glu Ala Trp Arg Arg					
	405		410		415	
Arg Thr Pro Arg	His Glu Ala Thr Leu Asp Val Val Gly Arg Val Leu					
	420		425		430	
Cys Asp Met Asn Leu Arg Gly Cys Leu Glu Asn Ile Arg Glu Thr Leu						
	435		440		445	
Glu Ser Pro Ala His Ser Ser Thr Thr His Leu Pro Arg						
	450		455		460	

<210> 26
 <211> 2141
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: human TNF-R in
 lTNF-R2

<220>
 <221> CDS
 <222> (213)..(1577)

<400> 26
 gaattctctg gactgaggct ccagttctgg cctttggggt tcaagatcac tgggaccagg 60
 ccgtgatctc tatgcccagag tctcaaccct caactgtcac cccaaggcac ttgggacgtc 120
 ctggacagac cgagtcccgg gaagccccag cactgcccgt gccacactgc cctgagccca 180
 katgggggag tgagaggcca tagctgtctg gc atg ggc ctc tcc acc gtg cct 233
 Met Gly Leu Ser Thr Val Pro
 1 5
 gac ctg ctg ctg cca ctg gtg ctc ctg gag ctg ttg gtg gga ata tac 281
 Asp Leu Leu Leu Pro Leu Val Leu Leu Glu Leu Leu Val Gly Ile Tyr
 10 15 20
 ccc tca ggg gtt att gga ctg gtc cct cac cta ggg gac agg gag aag 329
 Pro Ser Gly Val Ile Gly Leu Val Pro His Leu Gly Asp Arg Glu Lys
 25 30 35
 aga gat agt gtg tgt ccc caa gga aaa tat atc cac cct caa aat aat 377
 Arg Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn
 40 45 50 55
 tcg att tgc tgt acc aag tgc cac aaa gga acc tac ttg tac aat gac 425
 Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp
 60 65 70
 tgt cca ggc ccg ggg cag gat acg gac tgc agg gag tgt gag agc ggc 473
 Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly

75					80					85						
tcc	ttc	acc	gct	tca	gaa	aac	cac	ctc	aga	cac	tgc	ctc	agc	tgc	tcc	521
Ser	Phe	Thr	Ala	Ser	Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser	
90					95					100						
aaa	tgc	cga	aag	gaa	atg	ggg	cag	gtg	gag	atc	tct	tct	tgc	aca	gtg	569
Lys	Cys	Arg	Lys	Glu	Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val	
105					110					115						
gac	cgg	gac	acc	gtg	tgt	ggc	tgc	agg	aag	aac	cag	tac	cgg	cat	tat	617
Asp	Arg	Asp	Thr	Val	Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	
120					125					130					135	
tgg	agt	gaa	aac	ctt	ttc	cag	tgc	ttc	aat	tgc	agc	ctc	tgc	ctc	aat	665
Trp	Ser	Glu	Asn	Leu	Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn	
140					145					150						
ggg	acc	gtg	cac	ctc	tcc	tgc	cag	gag	aaa	cag	aac	acc	gtg	tgc	acc	713
Gly	Thr	Val	His	Leu	Ser	Cys	Gln	Glu	Lys	Gln	Asn	Thr	Val	Cys	Thr	
155					160					165						
tgc	cat	gca	ggg	ttc	ttt	cta	aga	gaa	aac	gag	tgt	gtc	tcc	tgt	agt	761
Cys	His	Ala	Gly	Phe	Phe	Leu	Arg	Glu	Asn	Glu	Cys	Val	Ser	Cys	Ser	
170					175					180						
aac	tgt	aag	aaa	agc	ctg	gag	tgc	acg	aag	ttg	tgc	cta	ccc	cag	att	809
Asn	Cys	Lys	Lys	Ser	Leu	Glu	Cys	Thr	Lys	Leu	Cys	Leu	Pro	Gln	Ile	
185					190					195						
gag	aat	gtt	aag	ggc	act	gag	gac	tca	ggc	acc	aca	gtg	ctg	ttg	ccc	857
Glu	Asn	Val	Lys	Gly	Thr	Glu	Asp	Ser	Gly	Thr	Thr	Val	Leu	Leu	Pro	
200					205					210					215	
ctg	gtc	att	ttc	ttt	ggg	ctt	tgc	ctt	tta	tcc	ctc	ctc	ttc	att	ggg	905
Leu	Val	Ile	Phe	Phe	Gly	Leu	Cys	Leu	Leu	Ser	Leu	Leu	Phe	Ile	Gly	
220					225					230						
tta	atg	tat	cgc	tac	caa	cgg	tgg	aag	tcc	aag	ctc	tac	tcc	att	gtt	953
Leu	Met	Tyr	Arg	Tyr	Gln	Arg	Trp	Lys	Ser	Lys	Leu	Tyr	Ser	Ile	Val	
235					240					245						
tgt	ggg	aaa	tcg	aca	cct	gaa	aaa	gag	ggg	gag	ctt	gaa	gga	act	act	1001
Cys	Gly	Lys	Ser	Thr	Pro	Glu	Lys	Glu	Gly	Glu	Leu	Glu	Gly	Thr	Thr	
250					255					260						
act	aag	ccc	ctg	gcc	cca	aac	cca	agc	ttc	agt	ccc	act	cca	ggc	ttc	1049
Thr	Lys	Pro	Leu	Ala	Pro	Asn	Pro	Ser	Phe	Ser	Pro	Thr	Pro	Gly	Phe	
265					270					275						
acc	ccc	acc	ctg	ggc	ttc	agt	ccc	gtg	ccc	agt	tcc	acc	ttc	acc	tcc	1097
Thr	Pro	Thr	Leu	Gly	Phe	Ser	Pro	Val	Pro	Ser	Ser	Thr	Phe	Thr	Ser	
280					285					290					295	
agc	tcc	acc	tat	acc	ccc	ggg	gac	tgt	ccc	aac	ttt	gcg	gct	ccc	cgc	1145
Ser	Ser	Thr	Tyr	Thr	Pro	Gly	Asp	Cys	Pro	Asn	Phe	Ala	Ala	Pro	Arg	
300					305					310						

aga gag gtg gca cca ccc tat cag ggg gct gac ccc atc ctt gcg aca	1193
Arg Glu Val Ala Pro Pro Tyr Gln Gly Ala Asp Pro Ile Leu Ala Thr	
315 320 325	
gcc ctc gcc tcc gac ccc atc ccc aac ccc ctt cag aag tgg gag gac	1241
Ala Leu Ala Ser Asp Pro Ile Pro Asn Pro Leu Gln Lys Trp Glu Asp	
330 335 340	
agc gcc cac aag cca cag agc cta gac act gat gac ccc gcg acg ctg	1289
Ser Ala His Lys Pro Gln Ser Leu Asp Thr Asp Asp Pro Ala Thr Leu	
345 350 355	
tac gcc gtg gtg gag aac gtg ccc ccg ttg cgc tgg aag gaa ttc gtg	1337
Tyr Ala Val Val Glu Asn Val Pro Pro Leu Arg Trp Lys Glu Phe Val	
360 365 370 375	
cgg cgc cta ggg ctg agc gac cac gag atc gat cgg ctg gag ctg cag	1385
Arg Arg Leu Gly Leu Ser Asp His Glu Ile Asp Arg Leu Glu Leu Gln	
380 385 390	
aac ggg cgc tgc ctg cgc gag gcg caa tac agc atg ctg gcg acc tgg	1433
Asn Gly Arg Cys Leu Arg Glu Ala Gln Tyr Ser Met Leu Ala Thr Trp	
395 400 405	
agg cgg cgc acg ccg cgg cgc gag gcc acg ctg gag ctg ctg gga cgc	1481
Arg Arg Arg Thr Pro Arg Arg Glu Ala Thr Leu Glu Leu Leu Gly Arg	
410 415 420	
gtg ctc cgc gac atg gac ctg ctg ggc tgc ctg gag gac atc gag gag	1529
Val Leu Arg Asp Met Asp Leu Leu Gly Cys Leu Glu Asp Ile Glu Glu	
425 430 435	
gcg ctt tgc ggc ccc gcc gcc ctc ccg ccc gcg ccc agt ctt ctc aga	1577
Ala Leu Cys Gly Pro Ala Ala Leu Pro Pro Ala Pro Ser Leu Leu Arg	
440 445 450 455	
tgaggctgcg cccctgcggg cagctctaag gaccgtcctg cgagatcgcc ttccaacccc	1637
acttttttct ggaaaggagg ggtcctgcag gggcaagcag gagctagcag ccgcctactt	1697
ggtgctaacc cctcgatgta catagctttt ctcagctgcc tgcgcgccgc cgacagtcag	1757
cgctgtgcgc gcggagagag gtgcgccgtg ggctcaagag cctgagtggg tggtttgca	1817
ggatgagggg cgctatgcct catgcccggt ttgggtgtcc tcaccagcaa ggctgctcgg	1877
gggcccctgg ttcgtccctg agcctttttc acagtgcata agcagttttt tttgtttttg	1937
ttttgttttg tttgtttttt aaatcaatca tgttacacta atagaaactt ggcactcctg	1997
tgccctctgc ctggacaagc acatagcaag ctgaactgtc ctaaggcagg ggcgagcacg	2057
gaacaatggg gccttcagct ggagctgtgg acttttgtac atacactaaa attctgaagt	2117
taaaaaaaaa aaaaaaagga attc	2141

<210> 27
 <211> 455
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: human TNF-R in
 1TNF-R2

<400> 27
 Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu
 1 5 10 15
 Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro
 20 25 30
 His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
 35 40 45
 Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
 50 55 60
 Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
 65 70 75 80
 Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
 85 90 95
 Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val
 100 105 110
 Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg
 115 120 125
 Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe
 130 135 140
 Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu
 145 150 155 160
 Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu
 165 170 175
 Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr
 180 185 190
 Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser
 195 200 205
 Gly Thr Thr Val Leu Leu Pro Leu Val Ile Phe Phe Gly Leu Cys Leu
 210 215 220
 Leu Ser Leu Leu Phe Ile Gly Leu Met Tyr Arg Tyr Gln Arg Trp Lys
 225 230 235 240
 Ser Lys Leu Tyr Ser Ile Val Cys Gly Lys Ser Thr Pro Glu Lys Glu

<400> 28

Asp Ser Val Xaa Pro Gln Gly Lys Tyr Ile His Pro Gln
1 5 10

<210> 29

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: N-terminal
amino acid sequence of protein purified from urine
(subsidiary sequence)

<220>

<221> UNSURE

<222> (7)

<223> identity of "Xaa" could not be determined

<400> 29

Leu Val Pro His Leu Gly Xaa Arg Glu
1 5

<210> 30

<211> 151

<212> DNA

<213> Homo sapiens

<400> 30

caggggaaaa tattcaccct caaataattc gatttgctgt accaagtgcc acaaaggaaa 60
ctacttgtag aatgactgtc caggcccggg gcaggatacg gactgcaggg agtgtgagag 120
cggctccttc acagcctcag aaaacaacaa g 151

<210> 31

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 31

Asp Ser Val Cys Pro Gln Gly Lys
1 5

<210> 32

<211> 7

<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<220>
<221> UNSURE
<222> (1)..(2)
<223> identity of "Xaa" could not be determined

<400> 32
Xaa Xaa Leu Ser Cys Ser Lys
1 5

<210> 33
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 33
Asp Thr Val Cys Gly Cys Arg
1 5

<210> 34
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 34
Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys
1 5 10

<210> 35
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 35
Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys
1 5 10

<210> 36

<211> 13
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: TNF-BP tryptic
 cleavage peptide

 <220>
 <221> UNSURE
 <222> (6)
 <223> identity of "Xaa" could not be determined

 <220>
 <221> UNSURE
 <222> (10)..(12)
 <223> identity of "Xaa" could not be determined

 <400> 36
 Tyr Ile His Pro Gln Xaa Asn Ser Ile Xaa Xaa Xaa Lys
 1 5 10

 <210> 37
 <211> 14
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: TNF-BP tryptic
 cleavage peptide

 <400> 37
 Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn Asn Lys
 1 5 10

 <210> 38
 <211> 8
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: TNF-BP tryptic
 cleavage peptide

 <400> 38
 Leu Val Pro His Leu Gly Asp Arg
 1 5

 <210> 39
 <211> 15
 <212> PRT
 <213> Artificial Sequence

 <220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 39

Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg
1 5 10 15

<210> 40

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 40

Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln
1 5 10

<210> 41

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<220>

<221> UNSURE

<222> (9)..(11)

<223> identity of "Xaa" could not be determined

<400> 41

Glu Met Gly Gln Val Glu Ile Ser Xaa Xaa Xaa Val Asp
1 5 10

<210> 42

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 42

Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp
1 5 10 15

Thr Val Cys Gly
20

<210> 43
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<220>
<221> UNSURE
<222> (6)
<223> indentity of "Xaa" could not be determined

<220>
<221> UNSURE
<222> (18)
<223> identity of "Xaa" could not be determined

<400> 43
Tyr Ile His Pro Gln Xaa Asn Ser Ile Cys Cys Thr Lys Cys His Lys
1 5 10 15

Gly Xaa Tyr

<210> 44
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<220>
<221> UNSURE
<222> (16)..(17)
<223> identity of "Xaa" could not be determined

<400> 44
Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Xaa
1 5 10 15

Xaa Arg

<210> 45
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic

cleavage peptide

<400> 45

Leu Cys Leu Pro Gln Ile Glu Asn

1 5

<210> 46

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<220>

<221> UNSURE

<222> (7)

<223> identity of "Xaa" could not be determined

<400> 46

Gln Asn Thr Val Cys Thr Xaa His Ala Gly Phe Phe Leu Arg

1 5 10

<210> 47

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 47

Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn

1 5 10

<210> 48

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 48

Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln

1 5 10

<210> 49

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 49

Gln Gly Lys Tyr Ile His Pro
1 5

<210> 50

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 50

caaggtaa atattcatcc

20

<210> 51

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 51

cagggt aagt acatccatcc

20

<210> 52

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 52

caaggtaa atatacatcc

20

<210> 53

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization

probe

<400> 53
caaggcaa atattcatcc 20

<210> 54
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybridization
probe

<400> 54
cagggcaagt acatccaccc 20

<210> 55
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybridization
probe

<400> 55
caaggcaa atatacatcc 20

<210> 56
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybridization
probe

<400> 56
caaggaaa atattcatcc 20

<210> 57
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybridization
probe

<400> 57
cagggaaagt acatccaccc 20

<210> 58
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 58
 caaggaaaat atatacatcc 20

 <210> 59
 <211> 20
 <212> DNA
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 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 59
 caagggaaat atattcatcc 20

 <210> 60
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 60
 caggggaagt acatccaccc 20

 <210> 61
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 61
 caagggaaat atatacatcc 20

 <210> 62
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 62

Glu Cys Gly Ser Gly Ser Phe Thr Ala Ser Glu Asn Asn Lys
1 5 10

<210> 63

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 63

Glu Cys Gly Ser Gly Ser Phe Thr Ala Ser Cys Asn Asn Lys
1 5 10

<210> 64

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 64

Phe Thr Ala Ser Glu Asn Asn Lys
1 5

<210> 65

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 65

Phe Thr Ala Ser Cys Asn Asn Lys
1 5

<210> 66

<211> 30

<212> DNA

<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: hybridization
 probe

<400> 66
 aaatgacgga gactcttggt gttcctaggg 30

<210> 67
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: hybridization
 probe

<400> 67
 aagtggcgta gtcttttggt gttcctaggg 30

<210> 68
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: hybridization
 probe

<400> 68
 aaatgtcgga gactcttggt gttcctaggg 30

<210> 69
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: hybridization
 probe

<400> 69
 aaatgacggt cactcttggt gttcctaggg 30

<210> 70
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: hybridization
 probe

<400> 70

aagtggcggt ctcttttggt gttcctaggg

30

<210> 71

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 71

aaatgtcggg cactcttggt gttcctaggg

30

<210> 72

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 72

aaatgacgga gaacattggt gttcctaggg

30

<210> 73

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 73

aagtggcgta gtactttggt gttcctaggg

30

<210> 74

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 74

aaatgtcggg gaacattggt gttcctaggg

30

<210> 75

<211> 30

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization probe

 <400> 75
 aaatgacggt caacattggt gttcctaggg 30

 <210> 76
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization probe

 <400> 76
 aagtggcggt ctactttggt gttcctaggg 30

 <210> 77
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization probe

 <400> 77
 aaatgtcggt caacattggt gttcctaggg 30

 <210> 78
 <211> 158
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> CDS
 <222> (1)..(153)

 <400> 78
 cag ggg aaa tat att cac cct caa aat aat tcg att tcg tgt acc aag 48
 Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Ser Cys Thr Lys
 1 5 10 15

 tcg cac aaa gga acc tac ttg tac aat gac tgt cca ggc ccg ggg cag 96
 Ser His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln
 20 25 30

 gat acg gac tgc agg gag tgt gag agc ggc tcc ttc aca gcc tca gaa 144
 Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu

35

40

45

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aac aac aag gatcc
Asn Asn Lys
      50

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158

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<210> 79
<211> 51
<212> PRT
<213> Homo sapiens
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<400> 79
Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Ser Cys Thr Lys
1 5 10 15

Ser His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln
20 25 30

Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu
35 40 45

Asn Asn Lys
50

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<210> 80
<211> 26
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: PCR primer
EBI-1786
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<400> 80
ggaattcagc ctgaatggcg aatggg 26

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<210> 81
<211> 25
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: PCR primer
EBI-1729
```

```
<400> 81
cctcgagcgt tgctggcggt tttcc 25
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<210> 82
<211> 23
<212> DNA
<213> Artificial Sequence
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<220>
 <223> Description of Artificial Sequence: PCR primer
 EBI-1733

 <400> 82
 ggtcgacatt gattattgac tag 23

 <210> 83
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: PCR primer
 EBI-1734

 <400> 83
 ggaattccct aggaatacag cgg 23

 <210> 84
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: mutagenesis
 primer EBI-1751

 <400> 84
 gtacttgaac tcgttcctg 19

 <210> 85
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: mutagenesis
 primer EBI-1857

 <400> 85
 ggcaagggca gcagccgg 18

 <210> 86
 <211> 53
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide EBI-1823

 <400> 86

agcttctgca ggtcgacatc gatggatcgg tacctcgagc ggccgcgaat tct 53

<210> 87

<211> 54

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide EBI-1829

<400> 87

ctagagaatt cgcggccgct cgaggtaccg gatccatcga tgtcgacctg caga 54

<210> 88

<211> 63

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide EBI-1820

<400> 88

agctctagag attcgcggcc gctcgaggta ccgcatccat cgatgtcgac ctgcagaagc 60

ttg

63

<210> 89

<211> 64

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide EBI-1821

<400> 89

ctagcaagct tctgcaggtc gacatcgatg gatccggtac ctcgagcggc cgcgatttct 60

ctag

64

<210> 90

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer
EBI-1986

<400> 90

caggatccga gtctcaaccc tcaac

25

<210> 91
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer
EBI-1929

<400> 91
gggaattcct tatcaattct caatctgggg taggcacaac ttc 43

<210> 92
<211> 81
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer
EBI-2452

<400> 92
cacagtcgac ttacatttgc ttctgacaca actgtgttca ctagcaacct caaacagaca 60
ccatgggcct ctccaccgtg c 81

<210> 93
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer
EBI-1922

<400> 93
gaggctgcaa ttgaagc 17

<210> 94
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer
EBI-2316

<400> 94
attcgtgcgg cgcctag 17

<210> 95

<211> 17
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer
EBI-2467

<400> 95
gtcggtagca ccaagga

17

<210> 96
<211> 17
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: M13-40
universal primer

<400> 96
gttttcccag tcacgac

17

<210> 97
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer
EBI-2112

<400> 97
gtccaattat gtcacacc

18

B3
cont